DOCUMENT RESUME

ED 244 210 CG 017 484

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TITLE Effects of Eating on Depressed Moods.
PUB DATE Aug 83
NOTE 12p.; Paper presented at the Annual Convention of the American Psychological Association (91st, Anaheim, CA, August 26-30, 1983).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Body Weight; College Students; *Depression (Psychology); *Eating Habits; Females; Higher Education
IDENTIFIERS *Moods; Velton Mood Induction Procedure

ABSTRACT

Research has found that depressed moods increase eating among persons who are dieting and among those characterized by high levels of weight fluctuation. To determine whether eating improves depressed moods among persons who score high on the weight fluctuation factor on the Restraint Scale (Herman, et al, 1978), 72 college women consumed either a large amount, a small amount, as much as they desired, or no chocolate milk following application of the Velton Mood Induction Procedure. Subjects also completed the Multiple Affect Adjective Checklist (MAACL) before and after the induction procedure and after the experimental sessions. Two to four days later, all subjects again completed the Restraint Scale. An analysis of the results supported the psychosomatic hypothesis that the eating behavior of high weight fluctuation persons affects their depressed mood states while no such effect of eating on mood exists for low weight fluctuation subjects. High weight fluctuation subjects in the small consumption condition were significantly less depressed than those in the control condition. These findings suggest that eating may be reinforced by reductions in depessed mood only so long as the amount consumed remains small. (BL)

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Effects of Eating on Depressed Moods

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Running head: Effects of Eating

CG 017484

Abstract

Effects of food consumption on experimentally induced depressed moods of persons classified as high and low on the weight fluctuation factor of the dieting restraint scale were investigated. Following application of the Velton mood induction procedure, subjects consumed either a large amount, small amount, as much as they wanted, or none of a high calorie liquid. The pattern of differences observed among post-eating mood scores supported a version of the psychosomatic hypothesis that the eating behavior of high weight fluctuation persons affects their depressed mood states while no such effect of eating on mood obtained for low weight fluctuation subjects.

Effects of Eating on Depressed Moods

There is considerable evidence that depressed moods serve to increase eating among persons who are dieting and among those characterized by high levels of weight fluctuation. (Baucom & Aikens, 1981; Frost, Ely, Goolkasian & Blanchard, 1982). Such findings are consistent with the psychosomatic hypothesis of obesity which suggests that among overweight persons eating may increase as a function of emotional arousal because that eating serves to reduce the negative mood state (Kaplan & Kaplan, 1957). While there have been repeated failures to find anxiety reduction as a function of eating (Herman & Polivy, 1975; McKenna, 1972; Schacter, Goldman & Gordon, 1968), few data are available concerning the question of whether eating alleviates depressed moods. Although Conrad (1970) has observed that overweight subjects report greater decrements in feelings of boredom and rejection following eating than normal weight subjects, in a survey of participants in a dieting program conducted by Leon and Chamberlain (1973) most of the dieters recalled feeling worse after eating in response to emotional arousal while nondieting controls reported feeling better.

The present experiment is an attempt to determine whether

eating improves depressed moods among persons who score high on the weight fluctuation factor of Herman et al's (1978) Restraint Scale. The weight fluctuation items were chosen as the basis for subject classification because (1) factor analyses of the restraint scale have indicated that these form a subset which is distinct from the concern for dieting items which comprise the rest of the restraint scale and accounts for a majority of the variance among the items in the scale (Blanchard & Frost, 1983; Drewnowski, Riskey & Desor, 1982), (2) research in which results based on the classification of subjects according to the weight fluctuation items are compared to those produced when subjects are classified according to the concern for dieting items consistently demonstrates that it is the weight fluctuation items which effectively separate those who exhibit anamolous eating behavior from those who do not (Frost et al, 1982; Panagopoulos, Larcom, Blanchard & Frost, Note 1), and (3) it has been suggested that weight fluctuation may be simply a better indicator of eating and weight problems than obesity (Bruch, 1957; Mendelson, Weinberg & Stunkard, 1961).

Method

The seventy-two undergraduate women who served as subjects, upon reporting to the laboratory for an experiment concerning the "effect of mood on taste perception," were asked to complete the

Multiple Affect Adjective Checklist (Zuckerman & Lubin, 1965) after which they were induced into a depressed mood with the Velton (1968) mood induction procedure and asked to complete the MAACL-D a second time. Subjects were randomly assigned in equal numbers to one of four experimental groups defined by whether they were encouraged to consume a small amount (90 ml), large amount (473 ml), as much as they wanted (ad lib up to 473 ml), or no chocolate milk during a five-minute consumption period. After the consumption period, the MAACL-D was administered a third time followed by an elation induction procedure designed to remove the effects of the depressed mood induction. A final MAACL-D was administered at the end of the experimental session. Two to four days later subjects were asked to complete the restraint scale and provided a complete explanation of the experimental procedures.

Results

A 4 (consumption condition) X 2 (weight fluctuation) X 2 MAACL-D-1, MAACL-D 2) mixed analysis of variance indicated that the Velton procedure effectively induced depressed moods, $F(1,64) = 137.0$, $p < .001$. In order to control for post-induction variability in mood scores, the hypothesis that the eating manipulation would affect the moods of high weight fluctuation subjects more than low weight fluctuation subjects was tested by

submitting the post-consumption mood scores to a 4 (consumption condition) X 2 (weight fluctuation) analysis of covariance with the post-induction MAACL-D scores serving as the covariate. Only the predicted two-way interaction was observed, $F(3,63) = 2.90$, $p < .05$. Comparisons among these cells indicated that high weight fluctuation subjects in the small consumption condition ($M = 18.6$) were significantly less depressed than those in the control condition ($M = 22.9$), $t(63) = 2.10$, $p < .05$.

Insert Table 1 about here

Discussion

The results offer some support for the hypothesis that eating reduces depressed moods among high weight fluctuators. However, it is clear from our results that it was only the small consumption condition which produces the expected decrement. That the consumption of larger amounts failed to produce a reduction in depressed moods compared to noneating controls is consistent with the finding reported by Leon and Chamberlain (1973) where dieters who overate in response to emotional arousal recalled feeling worse afterwards. These results suggest that eating may be reinforced by reductions in depressed mood only so long as the amount

consumed remains small. Mood elevations resulting from small levels of consumption may increase the frequency of eating episodes which involve small quantities. Whether the mood elevation effect of such small-quantity eating for persons characterized by high levels of weight fluctuation contributes to overeating and overweight remains to be demonstrated.

Reference Note

1. Panagopoulos, G., Larcom, C. J., Blanchard, F. A. & Frost, R. O. Dieting restraint, prior eating, palatability and food consumption. Paper presented at the annual convention of the Eastern Psychological Association, New York, 1980.

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Table 1

Mean Depressed Mood Scores for High and Low Weight Fluctuators as a Function of Amount Eaten

	Amount Eaten			
Weight Fluctuation	Small	Ad lib	Large	Control
High	18.6	20.3	22.8	22.9
Low	22.4	22.2	19.1	18.7

MS(error) = 23.558